

1 causes the clamp to distort downward from the
2 inner edge to the outer edge of the peripheral
3 contact surface so as to force the inner edge in
4 contact with the upper surface of the disc,
5 thereby distributing the downward force on the
6 fastener along an entire length of the straight
7 line segment.

8
9 2. The apparatus of claim 1, wherein the straight line
10 segment taper is constant along the entire peripheral
11 contact surface.

12
13 3. The apparatus of claim 2, wherein the taper is about
14 three degrees.

15
16 4. The clamp from claim 1, wherein the disc is contained
17 within a disc base assembly which further contains one or
18 more raised ribs incorporated onto the inner surface of the
19 disc base, thereby directing circulating air towards a
20 filter.

21
22 5. A clamp comprising:

23
24 a round, disc shaped body having an outer, round
25 peripheral edge;

1 said body having a central hole to mate to a hub;
2
3 said body having a lower surface with a clamp to disc
4 contact surface;
5
6 said clamp to disc contact surface further comprising
7 a peripheral edge and an inner edge;
8
9 said clamp to disc contact surface having a straight
10 line segment along a radius from a center of the
11 hub to the peripheral edge; and
12
13 said straight line segment having an incline angle
14 starting at the peripheral edge and extending
15 upward to the inner edge of the clamp to disc
16 contact surface.
17
18 6. The clamp of claim 5, wherein the straight line
19 segment incline angle is continuous along the entire clamp
20 to disc contact surface.
21
22 7. The incline angle of claim 6, wherein said incline
23 angle is about three degrees.
24 8. The clamp of claim 7, wherein when the clamp is
25 fastened by a fastener through the clamp into a hub, a force
26 will emanate from the fastener outbound to the peripheral

1 edge of the clamp to disc contact surface, wherein the force
2 causes the clamp to distort downward from the inner edge to
3 the peripheral edge of the clamp to disc contact surface so
4 as to force the inner edge in contact with an upper surface
5 of a disc, thereby distributing the force on the clamp along
6 an entire length of the straight line segment.

7

8 9. The clamp of from claim 8, wherein the force causes
9 the straight line segment incline angle to decline to zero
10 degrees.

11

12 10. The clamp from claim 5, wherein the disc is
13 contained within a disc base assembly which further contains
14 one or more raised ribs incorporated onto the inner surface
15 of the disc base, thereby directing circulating air towards
16 a filter.

17

18 11. A disc clamp comprising:

19

20 an annular clamp means functioning to fit over a hub
21 to hold a disc tightly to the hub;

22

23 said annular clamp means having a lower clamp to disc
24 surface means, functioning to push the disc
25 against the hub;

1 said annular clamp means having a taper means
2 functioning to start a taper at an outer edge of
3 the clamp to disc surface means to an ending
4 inside edge of the clamp to disc surface means;
5
6 wherein a fastener means functions to force the
7 annular clamp means against the hub; and
8
9 wherein a force emanating outbound from the fastener
10 means is distributed about evenly along the
11 clamp to disc surface means, thereby minimizing
12 a distortion of the disc.
13
14 12. The apparatus of claim 11, wherein the taper means
15 further comprises an angle of about 3 degrees.
16
17 13. The clamp from claim 11, wherein the disc is
18 contained within a disc base assembly which further contains
19 one or more raised ribs incorporated onto the inner surface
20 of the disc base, thereby directing circulating air towards
21 a filter.
22